F. H. McFARLAND.

BALE TIE.

APPLICATION FILED JAN. 28, 1913.

1,099,460. Patented June 9, 1914.

Fig. 1

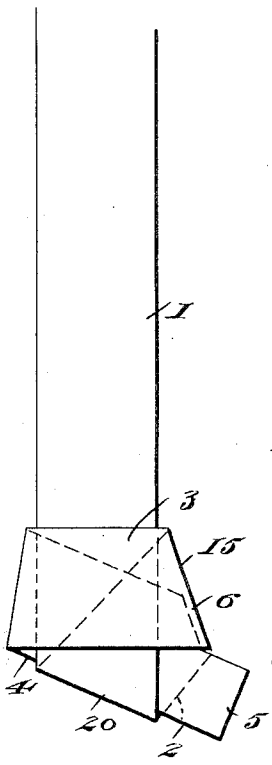


Fig. 2

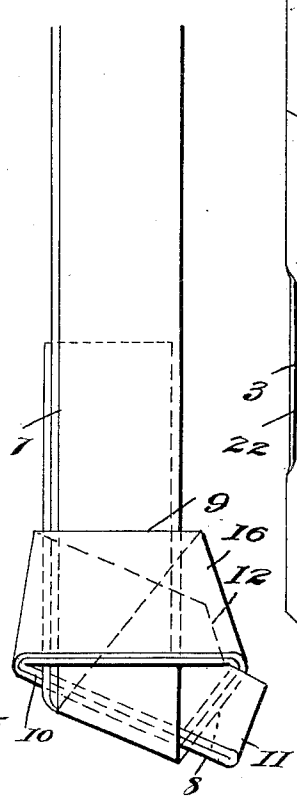


Fig. 3

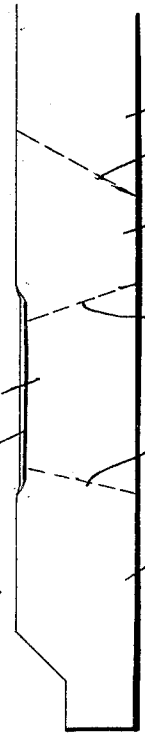


Fig. 4

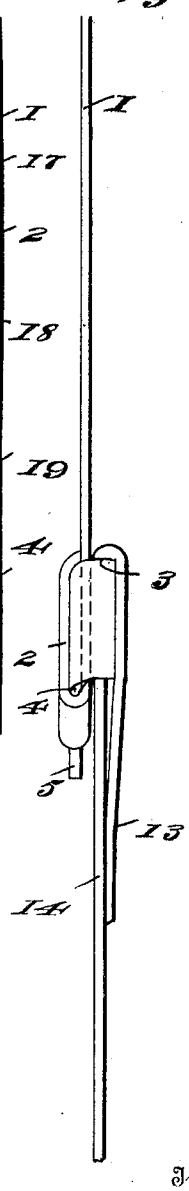


Fig. 5

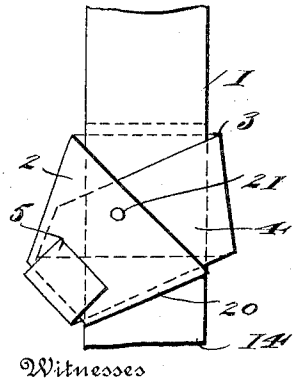
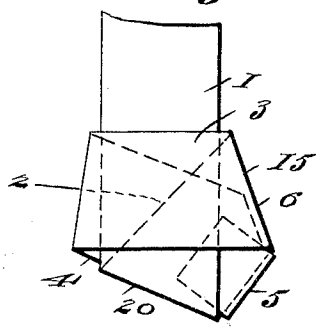


Fig. 6



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK H. McFARLAND, OF FORT WORTH, TEXAS.

BALE-TIE.

1,099,460. Specification of Letters Patent. Patented June 9, 1914.

Application filed January 28, 1913. Serial No. 744,706.

To all whom it may concern:

Be it known that I, FRANK H. McFARLAND, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Bale-Ties, of which the following is a specification.

This invention relates to ties for binding bales, such as cotton bales and other fibrous material, and more particularly to flat metallic bands, and the object is to provide ties which have the securing members permanently connected therewith and a part thereof and to dispense with buckles, clamps or other fastening devices.

Another object is to provide a tie which will not have projecting ends which would cause damage in handling the bales of cotton and which will meet the requirements of legislation in different States.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a rear elevation of the end of a tie with a knot formed thereon to receive and hold the other end of a tie. Fig. 2 is a perspective view of the end of a tie with a similar knot formed but formed of double material. Fig. 3 is a blank for forming such knot as shown in Fig. 1. Fig. 4 is an edge view of a union of the two ends of a bale tie, using the kind of a knot as previously shown. Fig. 5 is a rear view of the binding members, also showing a slight variation in the construction in that the extension 5 is bent back against the member 2.

Similar characters of reference are used to indicate the same parts throughout the several views.

The improved securing member is formed on the ordinary metallic bands. The end of the band is formed into a knot in such a way as to leave a bar 3 which will be at right angles to the tie 1 and which is sufficiently spaced from the tie 1 to permit the other end of the tie to be run up between the bar 3 and the tie 1, as shown in Fig. 4. The tie 1 is bent along the dotted line 17 to form the member or bar 2 and bent along the dotted line 18 to form the bar 3, and then bent along the line 19 to form the member 4. the tie 1 so that when the end 14 of the tie is run up between the bar 3 and the tie 1, the end 14 can have some lateral movement for convenience in bending the end 13 to form a securing loop. The passage way for the end 14 of the tie is wider than the tie. The knot is held securely in operative position by the bar 3, bar 2 and bar 4 together with the shoulder 6 which bears against the juncture 15 of the bars 2 and 3 and by the reduced member 5 which serves to resist downward movement of bars 2 and 3. The other sides of the bars 2 and 3 are held against downward movement by the juncture or union 20 of the bar 2 with the tie 1. The bar 3 is thus held securely at right angles to the tie 1 for receiving the other end of the tie and holding the locking member 13 against the bale of cotton.

The end of the tie may be doubled, if desirable, to form a knot or securing member. Fig. 4 shows the member 7 doubled and bent to form the bar 8, then to form the member 9, and then bent to form the member 10. The variation includes the shoulder 12 and the extension 11 for bracing the bar 9 which corresponds to the bar 3 of the previously described securing member. The construction of the securing member shown in Fig. 2 is the same as the securing member shown in Fig. 1 except that the material is doubled. The bar 3 is so arranged that it will withstand enormous pressure or strain and when the other end of the tie is looped over the bar 3 a complete and satisfactory fastening is accomplished. As a further means of strengthening the binding member, the parts 2 and 4 may be riveted or welded to the tie. See the rivet 21 in Fig. 5. The extension 5 may also be bent back against the member 2. This would increase the bracing of the bar 3 in place. To prevent the bar 3 from shearing or cutting the band 13, the edge may be slightly rolled at 22, the part which would engage the loop 13, being the upper part of the bar in Fig. 1.

While the binding member has been shown with a single piece of the band and with a double portion of the band bent to the proper positions, it is apparent that an increased number of folds may be used without departing from my invention.

In order to comply with certain legislation, the end 13 is placed next to the bale and is held in place by the bale. It is ap-

parent that the part 14 could be placed next The bar 3 must extend beyond the edges of to the bale.

What I claim, is,—

1. A bale tie having a knot formed at one end, said knot including a bar integral with the tie and spaced from the rear of the tie to form an entrance throat and positioned at right angles to and in front of the tie and diagonal bars in the rear of the tie and bracing both ends of said bar, and the other end of the tie having a loop formed thereon and engaging said first named bar.

2. A bale tie having a securing member integral therewith formed on one end, including a bar positioned on one side of and at right angles to the tie and members also integral with the tie on the other side of the tie and securing said bar at right angles to the tie, and the tie having its other end inserted between said bar and the tie and looped on said bar.

3. A bale tie having a knot formed on the end thereof, said knot including a brace bent on the outside of the tie and a continuation of the tie bent on the inside of the tie to form a bar at right angles to the tie and a continuation of the tie bent and inserted between the tie and said brace to coöperate with said brace to hold said bar at right angles to said tie, and said tie having the other end inserted between said bar and the tie and looped on said bar.

4. A bale tie having interlocking members, one end having a knot formed thereon by folds of the body and including a bar on one side of the tie and at right angles thereto and bracing members on the other side of the tie holding both ends of said bar in position and the other end of the tie having a loop formed thereon and engaging said bar.

5. A bale tie having interlocking members, one end having a knot formed thereon by folds of the body and including a bar on one side of the tie at right angles thereto and bracing members on the other side of the tie riveted together and holding said bar in position and the other end having a loop engaging said bar.

6. A bale tie having interlocking members, one end having a knot formed therein by folds of the body and including a bar on one side of the tie at right angles thereto and bracing members on the other side of the tie and the extreme end portion of the tie being reduced by an angular cut-out and the reduced portion lapped on said bracing members whereby said members are diagonally disposed and brace each other and said bar.

In testimony whereof, I set my hand in the presence of two witnesses, this 23rd day of January, 1913.

FRANK H. McFARLAND.

Witnesses:
A. L. Jackson,
J. W. Stitt.